

What is claimed is:

1. A process of preparing a printing plate from a printing plate material comprising a support, and provided thereon, an image formation layer, the process comprising the steps of:

fixing the printing plate material onto a fixing member with suction through-holes by suction that evacuates air through the suction through-holes, the surface (rear surface) of the support opposite the image formation layer facing the fixing member; and

imagewise exposing the fixed printing plate material to laser to form an image on image formation portions of the image formation layer,

wherein a degree of flatness of the surface on the image formation layer side of the fixed printing plate material is not more than 50 μm .

2. The process of claim 1, wherein the fixing member is a cylindrical drum, and the imagewise exposure is carried out from the outside of the drum while the drum is rotated.

3. The process of claim 1, wherein the aperture area of the suction through-holes at the central portion of the fixing member is smaller than that at the edge portions of the fixing member.

4. The process of claim 1, wherein the printing plate material has a total thickness of from 150 to 300 μm , a stiffness of from 0.50 to 5.00 N, and an average density of from 1.4 to 1.8 g/m^3 .

5. The process of claim 1, wherein the rear surface of the fixed printing plate material has a smoother value of not more than 0.06 MPa, and a coefficient of static friction of the rear surface to the fixing member is from 0.3 to 0.6.

6. The process of claim 1, wherein the support is flexible.

7. The process of claim 6, wherein the support is a polyethylene terephthalate or polyethylene naphthalate film sheet.

8. A printing plate material comprising a support, and provided thereon, an image formation layer, wherein the printing plate material is fixed onto a fixing member with suction through-holes according to a vacuum evacuation method, the surface (rear surface) of the support opposite the image formation layer facing the fixing member, and then the image formation layer is imagewise exposed to laser to form an image, a degree of flatness of the surface on the

image formation layer side of the fixed printing plate material being not more than 50 μm .

9. The printing plate material of claim 8, wherein the printing plate material has a total thickness of from 150 to 300 μm , a stiffness of from 0.50 to 5.00 N, and an average density of from 1.4 to 1.8 g/m^3 .

10. The printing plate material of claim 8, wherein the rear surface of the fixed printing plate material has a smoother value of not more than 0.06 MPa, and a coefficient of static friction of the rear surface to the fixing member is from 0.3 to 0.6.

11. The process of claim 8, wherein the support is flexible.

12. The process of claim 11, wherein the support is a polyethylene terephthalate or polyethylene naphthalate film sheet.

13. The printing plate material of claim 8, wherein the image formation layer contains a light-to-heat conversion material.

14. The printing plate material of claim 8, further comprising a hydrophilic layer.

15. The printing plate material of claim 14, wherein the image formation layer or the hydrophilic layer contains a light-to-heat conversion material.